ABSTRACT OF THE DISCLOSURE

A method and apparatus for performing a gap stack-up analysis for a machine gap. The gap is defined by opposing faces of two machine parts. A vector loop is determined beginning at one of the opposing faces, traversing through the machine parts that affect the gap dimension and terminating on the other opposing face. The dimensions and the tolerances associated with each of the parts in the vector loop are combined to yield the gap dimension and the gap tolerance. In one embodiment the gap stack-up is determined by a computer program product for execution by a computer processor.